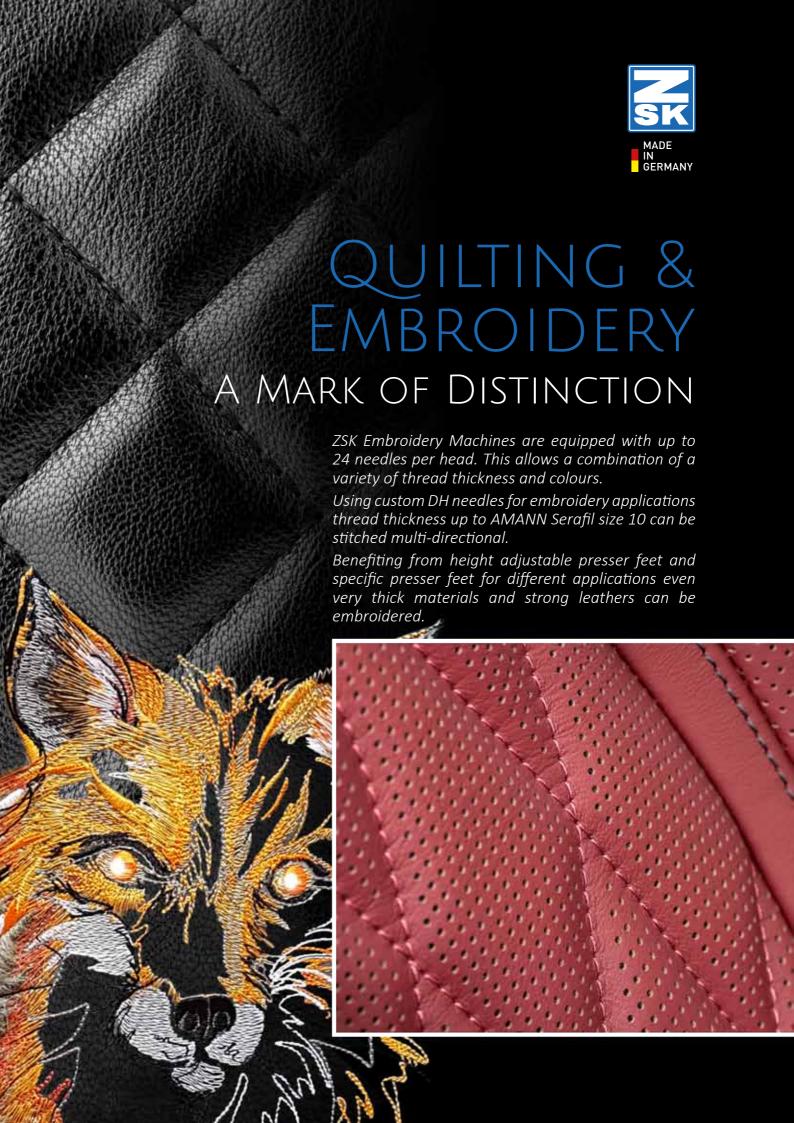


## AUTOMOTIVE, FASHION & FURNITURE - SOLUTIONS -





# STITCHING, PERFORATION & EMBROIDERS

ZBK

## Creative Elegegance

A growing number of leather applications require the combination of perforation and stitching. ZSK has developed a unique camera detection system and an optical positioning system.

Previously perforated items can be detected and the embroidery can be stitched at the desired location. Throughout the process the camera can check the position and adjust the embroidery file to achieve results that fulfill highest expectations.





## START-UP CAPABILITIES

# EMBELLISHMENT AND PERSONALISATION OF CAR FOOT MATS

Textile foot mats can embellished using two processes. Logos can be embroidered as seperate emblems and attached via stitching or heat. The second process is to embroider the logos directly onto the foot mat.

ZSK offers specific solutions including pneumatic holders for foot mats to reduce downtimes, dust protection for drive systems, integration of online personalisation as well as all metall parts in the embroidery head that ensure 24/7 production of even challenging foot mats very well.





# THE RIGHT CHOICE

### BRING IDEAS TO LIFE

ZSK offers more than 250 different machine models that can fulfill nearly all demands. Going beyond the normal, ZSK is ready to develop customer specific models and solutions where required.

For applications using camera detection and positioning systems only single head embroidery machines can be used to allow perfect positioning of each item.

The size of the embroidery field per head starts at 500 mm x 500 mm for smaller personalisation and seat demands and can go up to 1.100 mm x 1.400 mm which is useful for headlinger components and larger seat components.

All machines can be equipped with a variety of optional accessories and custom build material holders.





# FEATURES MARK THE DIFFERENCES



#### **Custom Frames**

To cut down unneccessary cutting processes, it is a popular choice to embroider cut to size components. The ZSK Application Team develops and manufactures unique frames to fulfill any requirement.



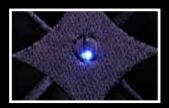
#### Auto Select Bobbin Changer

The embroidery machine has to change its bobbins approximately every 45 minutes. The bobbin changer handles this task automatically for 8 bobbins per head. The newly developed auto select function allows matching of upper and bottom thread. This might be useful for the right choice of colours, thickness of thread or to match conductive thread.



#### 24 Needles

Normal embroidery machines use 6 to 15 needles. ZSK has developed 24 needle machines that allow maximizing efficiency in production environments that use multiple colours. Usual requirements obtain thin and thick threads in one design. The 24 needle embroidery head masters efficiency in such applications.



#### **Functional Sequin Device**

Flexible electronics are a growing trend. Going beyond the embroidery of conductive threads, ZSK offers sequin devices that can place LEDs, RFIDs or small electronics anywhere on fabric.



#### Large Sewing Fields

CNC Sewing Machines are typically Arm Type Machines and therefore limited in stitch field size. ZSK machines - designed as Bridge Type Machines - are more robust and allow larger stitch fields.



#### Safety Features

In cooperation with various Health & Safety Specialists ZSK has developed a variety of features that go well beyond the required standards. The customer has the choice of a variety of light curtains, sensors, key lock systems, status lights and many more.



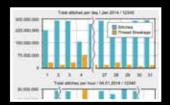
#### **Camera Positioning System**

ZSK installs camera systems about 1 to 1.5 m above the embroidery field to analyze fields of up to 400 mm x 400 mm. Larger parts can be scanned in two steps. The system analyzes the design and matches the embroidery file. During the stitching process additional scans ensure that there is no visible displacement in the final design.



#### MY.ZSK

MY.ZSK is a production management system that analyses the machine data and can be used to improve efficiencies in the production. Going beyond the standard, personalised reports can be generated and machines can be equipped with additional screens for observation of running time estimates.



#### **CAD Software**

ZSK develops the EPCwin Software series. DXF files can be loaded into the CAD suite and be transformed to embroidery files, which is defined as "digitizing". The machine control unit T8-2 allows editing of such designs.



#### **Multi-Directional Stitching**

Sewing and Embroidery Machines are generally not suitable for multidirectional designs. Either the thread is in front or behind the needle lwhich leads to different appearances. For sewing ZSK uses custom DH type needles that allow multi-directional stitching that fulfills highest expectations.



#### **Specific Presser Feet**

ZSK offers custom presser feet for special applications. Important to mention is the hemispheric presser foot that allows materials with thick foam layers to be embroiderd without missing stitches. This design is 2 mm longer than the typical presser foot and avoids looping.





# TECHNICAL

# FROM DECORATION TO FUNCTION

Established embroidery technology adjusted to the conditions of new materials leads to forward-thinking operating procedures for visionary products and a rethinking of existing process engineering.



#### Embroidery Technology: W-Head

ZSK's W-Head provides the laying of fibers, wires and tubes onto textile and other flexible carrier materials.

This technology is currently used for i.e. car seat and steering wheel heating.



#### Embroidery Technology: F-Head

The F-Head is ZSK's standard embroidery head. This technology is qualified to embroider threads like conductive yarn. With optional devices i.e. functional sequins with LED a electrical circuit can be placed, fixed and automatically connected with conductive threads.



#### Embroidery Technology: K-Head

The K-Head faciliates the so called moss embroidery. With only one thread it creates voluminous and soft surfaces. In combination with conductive material, this technology is ideal for producing sensors that can be used to measure and observe body functions.



## OPTIONS

# OPTIONS FOR SOPHISTICATED AUTOMATED PRODUCTION

- 1 Active wire and fiber supply systems
- 2 Automatic unwinding function
- Automatic change of different media
- 4 Pneumatic media trimmer
- 5 Wire hit detection system

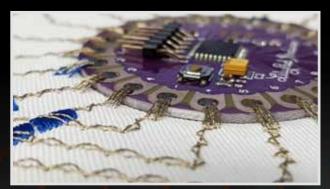
- 7 Carbon protection for the electronics
- 8 Pneumatic clamping and stretching system
- 9 Automatic pull through system
- Semi automatic pull through system





# SENSORS

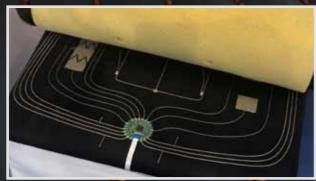
SGVA 0109-825 - ZSK Special Embroidery Machine with F-, K- and W-Head



Conductive Yarn



Textile Electrodes in different Shapes



Capacitive Sensors and LED Sequins



Embroidered Dashboard with Capacitive Sensors



## SERVICE



#### Hotline

Sales and service partner in over 75 countries worldwide will help you when you need it.



#### **Training Courses**

Training courses for customers and partners on location or at ZSK headquarter training center.



#### **Spare Parts**

Guaranteed fast and global delivery and installation for over 10.000 available spare parts.



#### **Technical Support**

Trained experts and technicians that speak your language in more than 75 countries.

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